REMARKS

This is responsive to the Office Action that was mailed on November 14, 2003. Claims 2, 8-11, and 16-18 are cancelled, without prejudice to their reassertion in this or a continuing application. No new matter is introduced by this Amendment. Claims 12 and 13 remain in the application.

Claims 2, 8-13, and 16-18 were rejected under the second paragraph of 35 U.S.C. § 112. The Examiner alleges that the claims embrace subject matter that does not share a common utility and that does not share a substantial structural feature disclosed to be essential to that utility, and that accordingly the claims involve improper Markush groups. It is respectfully submitted that this ground of rejection is not applicable to claims 12 and 13, particularly as they are amended hereinabove.

MPEP 2173.05 (h) states that:

> ... when the Markush group occurs in a claim reciting a process or a combination ..., it is sufficient if the members of the group are disclosed in the specification to possess at least one property in common which is mainly responsible for their function in the claimed relationship....

Both of claims 12 and 13 herein are drawn to methods that employ a diffusion apparatus which has a solvent inlet tube connected to a solvent outlet tube through a means that promotes diffusion of a liquid. The Markush group in the claims now joins just two different classes of embodiments of the liquid diffusion means: (i) those in which a solvent inlet tube and a solvent outlet tube have different inner diameters, and (iii) those in which a solvent outlet tube is connected to a solvent inlet tube by a connecting part having a diameter that is larger than the diameters of the diameters of the solvent inlet tube and the solvent outlet tube.

Regardless of whether or not the Examiner considers that these features share sufficient structural attributes, it is clear that they possess at least one property in common (diffusion promotion) which is mainly responsible for their function in the claimed relationship. This alone is sufficient to satisfy the standard set forth in the Manual of Patent Examining Procedure.

However, in fact, the Markush group in question now clearly does have a significant shared structural attribute – namely, variations in diameter. Accordingly, the Examiner is respectfully requested to withdraw this ground of rejection.

Claims 2, 8, and 16-18 were rejected under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as being unpatentable over, US 4,475,821 (Koch). Applicants do not agree that either of these grounds of rejection is proper. Nevertheless, in order to expedite the prosecution of this application, claims 2, 8, and 16-18 have been cancelled.

Claims 2, 8-13, and 16-18 were rejected under 35 U.S.C. §103(a) as being unpatentable over US 5,117,109 (Asakawa) in view of Koch. Claims 12 and 13 were additionally rejected under 35 U.S.C. §103(a) as being unpatentable over Asakawa and Koch in view of *Introduction to Modern Liquid Chromatography* (Snyder).

Asakawa shows, in Figure 1, that pipe 36 is placed just before trapping column (TC) but pipe 39 is placed just before separating column (C3). Thus, in Asakawa, the solution flows from a thick pipe 36 to trapping column (TC) to pipe 39 to the separating column. In contrast, in the present invention, the solution flows from the trapping column to the diffusion-promoting device to the separating column.

In Koch, solvents A, B, and C – containing no sample – are introduced from mixing chamber 23 via pipe 24 to chromatographic analytical instrument 25. As shown in Figure 9 of the present application, conventionally, chromatographic analytical instruments are provided with an injection member (I) to receive a sample, a separation column (C) to separate the sample, and a detecting member (D) to detect the separated sample. Koch mixing chamber 23 is to mix solvents containing no sample. The sample in Koch is separately introduced into the chromatographic analytical instrument 25. For this reason, it is necessary that an injection be provided between the mixing chamber and the separation column to introduce the sample in Koch. In Koch, the mixing chamber is not placed just before the separation column. In contrast, in the present invention, a solvent containing a sample is passed through the diffusion-promoting device and then the solvent containing the sample, which has been uniformly diffused by device (DU), is immediately introduced into a separation column. The sensitivity to target components in quantity determination is unexpectedly improved, as discussed on page 7 of the present specification.

Clearly, the inventions of claims 12 and 13 differ markedly from the technology disclosed by Asakawa and Koch (and Snyder). The manner in which the presently claimed inventive process is distinguished over the prior art was discussed with Examiner Therkorn in an interview on 4 February 2004. Examiner Therkorn agreed that the present amendment of the claims and discussion of the references would overcome the rejections of record.

Conclusion

If the Examiner has any questions concerning this application, he is requested to contact Richard Gallagher, Reg. No. 28,781, at (703) 205-8008.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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By _____

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